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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,491	06/09/2005	Gi-Bong Kwon	0630-2337PUS1	7065

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BIRCH STEWART KOLASCH & BIRCH  
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EXAMINER
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CESTERO, JOSE R

ART UNIT	PAPER NUMBER
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2809

NOTIFICATION DATE	DELIVERY MODE
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05/10/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

**Application No.**

10/538,491

**Applicant(s)**

KWON ET AL.

**Examiner**

Jose Cestero

**Art Unit**

2809

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/09/2005 and 09/19/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Notice to applicant(s)*

1. The following changes are needed to the disclosure of the invention and the drawings. Missing number, page 6 line 22, motor 100. Missing labels Fig. 1 "Prior Art" and repeated statement, Fig. 3 step S17 and S18, "Operating a motor in the power mode". Applicant is required to make the proper correction.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-2, 6-7 rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al. (U.S. Patent No. 6,841,967).

According to claim 1,

An apparatus for controlling an operation of a compressor comprising:  
(Applicant's acknowledge prior art U.S. Patent No. 6,841,967; Fig. 2) A control unit (Fig. 2; Part 400) for generating a control signal for selecting a main winding (Fig. 2; Part 100A-1, MC) coil of a linear motor of a compressor (Fig. 2; Part

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3-5 and 8-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. Patent No. 6,841,967) in further view of Kim (U.S. Patent No. 6,877,326).

Kim et al. discloses all the limitations of claim 1.

However, Kim et al. does not disclose that the load capacity is determined based on at least one of an inside temperature of the refrigerator and an ambient temperature.

Kim discloses in paragraph 5 lines 52-63 that the load capacity is determined based on at least one of an inside temperature of the refrigerator, and an ambient temperature in order to control the reciprocating compressor piston from colliding with the discharge valve in case of an overload (See Fig.5).

Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to determine load capacity based at least on the inside temperature of the refrigerator and an ambient temperature,

100A) or an auxiliary winding coil (Fig. 2; Part 100A-1, SC1~SC4) of the linear motor or the auxiliary winding coil on the basis of the control signal;

Wherein the main winding coil of the linear motor is divided into a plurality of auxiliary winding coils (See Paragraph 4, lines 4-24).

According to claim 2,

The apparatus of claim 1, wherein the control unit generates the control signal for selecting the winding coil of the linear motor or the auxiliary winding coil when a voltage applied to the linear motor is varied (See Paragraph 4, lines 7-16).

According to claim 6,

The apparatus of claim 1, wherein the control unit generates a control signal for selecting the main winding coil of the linear motor or the auxiliary winding coil in order to control the amount of currents flowing into the winding coil of the linear motor (Paragraph 4, lines 13-15).

According to claim 7,

The apparatus of claim 1, wherein the switching unit is a relay (Paragraph 4, lines 13-15).

as taught by Kim, in order to control the reciprocating compressor piston from colliding with the discharge valve in case of an overload.

According to claim 4, the discussion regarding claim 3 applies.

According to claim 5, the discussion regarding claim 3 applies.

According to claim 8,

Kim et al. discloses a method for controlling an operation of a compressor comprising:

applying power to a main winding coil of a linear motor of a compressor installed at the refrigerator or an auxiliary winding coil of the linear motor and wherein the main winding coil of the linear motor is divided into a plurality of auxiliary winding coils.

However, Kim et al. does not disclose that the applying power to a main winding coil of a linear motor of a compressor installed at the refrigerator or an auxiliary winding coil of the linear motor on the basis of an inside temperature of the refrigerator and a predetermined reference temperature value

Kim discloses in paragraph 5 lines 52-63 that the applying power to a main winding coil of a linear motor of a compressor installed at the refrigerator or an auxiliary winding coil of the linear motor on the basis of an inside temperature of the refrigerator and a predetermined reference temperature value.

According to claim 9, the discussion regarding claim 8 applies.

According to claim 10, the discussion regarding claim 8 applies.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Jose R. Cestero, whose telephone number is (571) 270-1744. The examiner can normally be reached on Monday-Friday from 7:30 AM-5:00 PM.

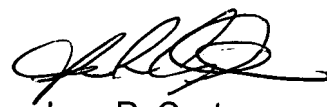
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bruce, can be reached on (571) 272-2487. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/jrc  
May 1, 2007



Jose R. Cestero  
**Patent Examiner**



DAVID BRUCE  
**SUPERVISORY PATENT EXAMINER**